

*d*, main portion of nephridium, of a brown colour, due to granular matter in cells; *o.m.*, oblique muscles which bind down nephridium; *l.m.*, longitudinal muscles; *s*, notopodial bristle-sac; *n*, nerve-cord.

*Fig. 3.* Transverse section through nephrostome. *d*, vascular processes on dorsal lip, with excretory products between; *v*, ventral lip of nephrostome.

*Fig. 4.* Longitudinal section through nephrostome. *d* and *v* as above; *b.v.*, small blood-vessels which ramify over main portion of nephridium; *l.m.*, longitudinal muscles in body-wall.

*Fig. 5.* Longitudinal section to show reproductive organs. *d* and *v* as above; *c*, cord of cellular tissue running down from ventral lip of nephrostome to the upper part of gonad (*u.g.*), through which runs the blood-vessel (*b*); *p*, posterior dilated portion of nephridium; *p.g.*, posterior portions of gonad; *b.v.*, blood-vessels; *l.m.*, longitudinal muscles of body-wall; *t.m.*, transverse muscles; *gl.*, glandular layer of cells on external surface of body (hypoderm?).

*Figs. 6-9.* Drawings from live specimens of post-larval stages of *Arenicola*.

6. Anterior region. *m*, mouth; *p*, prostomium.

7. Four somites of body—fifth, sixth, seventh, and eighth. *h*, heart; *v.v.*, ventral blood-vessel; *g*, gut diverticula; *s*, stomach; *n*, nephridium.

8. Dorsal bristles.

9. Ventral bristles, of two kinds.

*Fig. 10.* Longitudinal section through portion of body. *o*, otocyst; *gl*, gullet; *g*, gut diverticula; *s.i.*, sacculated part of intestine; *h*, heart; *s*, stomach; *v.v.*, ventral blood-vessel.

*Figs. 11-13.* Sections through head-region. *s.æ.*, supra-oesophageal ganglion or brain; *o*, otocyst; *m*, mesenchyme-tissue; *c*, nerve-commissure from *s.æ.* to *sb.æ.*; *sb.æ.*, suboesophageal ganglion; *ph.*, pharynx.

11. Transverse section.

12 & 13. Longitudinal sections.

*Fig. 14.* Adult otocyst drawn for comparison with above.

## XLVI.—On new small Mammals from the Neotropical Region.

By OLDFIELD THOMAS.

DURING the past six months several collections of small mammals from different parts of Central and South America have been received at the British Museum, and among these there are a certain number of new species, which may be conveniently all described in one paper.

GLYPHONYCTERIS \*, gen. nov.

(Fam. *Phyllostomatidæ*; group *Vampyri*.)

Nose-leaf narrow, bound down to the muzzle in front. Chin-warts apparently only two, one on each side of a central

\* γλύφειν, to chisel.



groove. Ears separate, not connected across the head. Tail short, perforating the interfemoral membrane and appearing on its upper surface. Wing-membrane from the side of the ankle.

Skull thin and papery. Profile-line from top of muzzle to crown nearly straight, not markedly concave. Anteorbital region broad, with a distinct inflation just above the anterior corner of each orbit, the breadth of the muzzle over the ante-orbital foramina much greater than the postorbital breadth.

*Dentition*.—I.  $\frac{2}{2}$ , C.  $\frac{1}{1}$ , P.  $\frac{2}{3}$ , M.  $\frac{3}{3} \times 2 = 34$ .

Upper middle incisors large, vertical, chisel-shaped, their cutting-blades broad, very thin antero-posteriorly. Outer incisors minute. Canines short, sharply pointed, their antero-posterior basal about equal to their vertical diameter. Premolars subequal, oval or rounded in section. Lower incisors distinctly tricuspid, subequal. Canines low, scarcely exceeding the other teeth in height. Premolars subequal, the median one fully as large as the other two.

This genus is evidently most nearly allied to *Micronycteris* (*Schizostoma* of Dobson's Catalogue), but differs by its unconnected ears, broader muzzle, inflated anteorbital region, straight frontal profile, and peculiar chisel-shaped incisors. No other described genus shows its short tail, dental formula, and well-developed middle lower premolar.

*Glyphonycteris sylvestris*, sp. n.

Externally very similar to *Hemiderma brevicauda*, though rather smaller\*. Ears short, their tip forming an almost square angle, the outer and inner edges distally being approximately at right angles to each other; lower part of outer edge ending in a low rounded lobule. Fur soft and fine, not extending on to the wings or limbs, except that the pollical metacarpals and the backs of the feet are thinly tufted. Colour above mixed smoky grey, the hairs dark smoky basally and terminally, white for their middle third; below they are smoky basally and dull whitish terminally. Interfemoral membrane broad, extending in the middle line to the level of the distal third of the tibiæ.

Skull and teeth as described above.

\* This resemblance is so great that almost the only character which affords a ready means of distinguishing the two is the short and delicate thumb of *Glyphonycteris* as opposed to the long heavily clawed one of *Hemiderma*. In colour the two are almost identical.



Dimensions of the type (an adult male skin) :—

Forearm 40 millim. (=1.56 inch).

Head and body (measured by collector in flesh) 50 millim.; ear (dried) 17; thumb, with claw, 9.2; middle finger—metacarpus 36, first phalanx 13.5, second phalanx 20, third phalanx 10.5; tibia 15; hind foot, with claws, 10.6; calcar 7.2.

Skull: greatest length 19.6; basal length 16; greatest breadth 9.6; breadth of muzzle at inflations, just over ante-orbital foramina, 5.7; interorbital breadth 4.6; front of upper canine to back of m.<sup>3</sup> 8.

*Hab.* Imravalles, Costa Rica.

Coll. C. F. Underwood, Nov. 8, 1895.

*Rhipidomys venezuelæ*, sp. n.

Closely allied to *Rh. macrurus*, Gerv., with which it shares the general rich rufous colour, long tail, and sharply defined pure white belly. Ears large, much larger and, especially, broader than in *Rh. macrurus*. General colour above rather orange-rufous in the type (an old male), but in a younger female clearer rufous, similar to some specimens of *Rh. Sumichrasti*. Hands and feet, as usual, with the metapodials brown mesially, the remainder and the digits white. Tail long, uniformly dark brown above and below, hairy and tufted, but less so than in most of the larger species of the group.

Skull with fairly long nasals; a rather narrow interorbital region, whose edges are sharply ridged. Interparietal large, its anterior edge very concave forwards. Anterior palatine foramina extending backwards to the level of the front edge of m.<sup>1</sup>.

Dimensions of the type (an adult male, measured in the flesh by collector) :—

Head and body 155 millim.; tail 160; ear 20. In the dried state the hind feet are 28 millim. long and the ear has shrunk to 19 millim.

Skull: basal length 31.2; basilar length from henselion 29; greatest breadth 19.5; nasals  $12 \times 4$ ; interorbital breadth 5.2, interparietal  $5.1 \times 9.2$ ; palate length from henselion 15.1; diastema 10; anterior palatine foramina  $7.6 \times 3$ ; length of upper molar series 5.1.

*Hab.* Merida, Venezuela, alt. 1630 metres.

Coll. S. Briceno, March 5, 1896.

Besides the differences in the size of the ears and the hairiness of the tail this species differs from *Rh. macrurus* by



its decidedly narrower interorbital region and slenderer muzzle, the same cranial characters also separating it from *Rh. latimanus*.

*Rhipidomys microtis*, sp. n.

A rather small *Rhipidomys*, with a scarcely pencilled tail and very small ears.

Fur close and soft. General colour fulvous, duller and less rufous than in the majority of this group; perhaps nearest to Ridgway's "clay-colour"; in the centre of the back finely lined with black, clearer on the sides. Under surface white, the hairs white to the roots; line of demarcation on sides of belly less well defined than usual. Whiskers long and numerous. Ears small and narrow, thinly haired, pale brown. Metapodials brownish, digits dull white, but the difference little marked. Tail long, very finely scaled, uniformly brown throughout; scarcely more bushy than in non-*Rhipidomyine* Vesper-rats.

Skull of only specimen unfortunately much broken. Muzzle short and narrow, supraorbital ridges sharp. Zygomatic plate not projected forwards. Anterior palatal foramina long, reaching backwards to the level of the first lamina of m.<sup>1</sup>. Molars as usual in the group.

Dimensions of the type (an adult male in skin):—

Head and body 109 millim.; tail 136; hind foot 25; ear  $12 \times 9$ .

Skull: basilar length from henselion (c.) 22; nasals  $9.6 \times 3.4$ ; interorbital breadth 4.8; palate length from henselion 11.5; diastema 7.3; anterior palatine foramina  $6 \times 2.6$ ; length of upper molar series 4.7.

*Hab.* Salina del Vatan, Western Cundinamarca, Colombia.

*Type* killed Nov. 16, 1895.

*Rhipidomys fulviventer*, sp. n.

About the size of *Rh. microtis*. Fur very thick and soft. General colour above fulvous, thickly lined with black. Underside clearer fulvous or even buff, the line of demarcation scarcely marked; hairs of belly slaty grey basally, buffy terminally. Chin and chest whiter. Mammæ  $1-2=6$ . Ears rather small, uniformly brown. Metapodials with the usual piebald patches strongly marked; digits pure white. Tail long, uniformly brown, not very thickly haired basally, but with a long and well-defined pencil terminally.

Skull with a large rounded brain-case and slender narrow



face. Interorbital region flat, its edges square, not heavily ridged. Palatal foramina rather narrow for the group, extending backward to the level of the front of m.1. Bullæ rather, though not measurably, larger than in the allied species of the group.

Dimensions of the type (an adult female in skin):—

Head and body 113 millim.; tail 125, with terminal tuft 141; hind foot (moistened) 24; ear (dry) 14.

Skull: basal length 25.7; basilar length from henselion 23.8; greatest breadth 16.6; nasals  $10.5 \times 3.7$ ; interorbital breadth 4.3, interparietal  $4.1 \times 10.6$ ; palate length from henselion 12.8; diastema 8; palatine foramina  $6.2 \times 2.2$ ; length of upper molar series 4.7. Lower jaw: condyle to incisor-tip 18.8.

*Hab.* Agua Dulce, W. Cundinamarca, Colombia.

*Type* collected Sept. 19, 1895.

This pretty Vesper-rat differs from all other members of *Rhipidomys* by its slate-mixed fulvous belly, this part being in the other species perfectly pure white. A very young specimen from Fanabistá corresponds in all respects with the old one.

*Oryzomys niveipes*, sp. n.

General appearance remarkably like *O. laniger*, Thos., although it is slightly larger. Fur very long, soft, and fluffy. General colour dull olive-fulvous, darker mesially above, clearer and paler along the sides and below; line of demarcation on sides indistinct. Hairs everywhere above and below slate-coloured basally. Ears large, well-haired, black. Hands and feet silvery white above, without darker metatarsals. Tail long, thinly haired, brown above, paler below.

Skull very different from that of *O. laniger*. Face long and slender, with a narrow muzzle and long, narrow, parallel-sided interorbital region, whose edges are rounded and not ridged. Brain-case smoothly rounded, not broad in proportion to its length. Zygomatic plate little projected forward. Palatal foramina reaching just past the anterior end of m.1.

Dimensions of the type (an adult male in skin):—

Head and body 113 millim.; tail 140; hind foot 26; ear 18.

Skull: basal length 26.8; basilar length from henselion 25; greatest breadth 16; nasals  $12.4 \times 3.8$ ; interorbital breadth 4, interparietal  $3.5 \times 10.5$ ; palate length from henselion 13.2; diastema 8.7; palatal foramina  $7 \times 2.4$ ; length of upper molar series 5. Lower jaw: condyle to incisor-tip 19.5.



*Hab.* La Oya del Barro, W. Cundinamarca, Colombia.

*Type* collected Sept. 2, 1895.

The resemblance of this species externally to *O. laniger* is so great that practically the only means of distinguishing the two lies in the brownish feet or, rather, metatarsals of *O. laniger* as compared with the silvery-white ones of the new form. The skulls, however, are wholly different from one another both in size and proportions.

*Oryzomys* (?) *lugens*, sp. n.

Very similar in all respects to the peculiar *O. incanus* described recently from Peru\*. Fur soft, close, and velvety. General colour finely grizzled olive-brown, but little lighter below than above. Ears large, brown. Hands and feet slender, thinly haired, brown above, the hairs at the bases of the claws whitish. Tail about the length of the head and body, uniformly thinly haired, brown above, rather lighter below.

Skull in shape almost suggesting that of an *Oxymycterus* or *Acodon*. Muzzle long, cylindrical. Interorbital convex above and rounded laterally, without trace of ridges; indeed, a section through the nasal chamber between the orbits would present an almost circular outline. Brain-case narrow, smoothly rounded. Zygomata very slender, little expanded, their anterior root narrow, slanted, without projecting plate. Palatine foramina extending back to the level of the front of  $\overline{m.1}$ . Lower jaw very slender, matching that of *O. incanus*. Molars rather Acodont in appearance, with comparatively high crowns;  $\overline{m.1}$  with its anterior lamina unicuspid, so as to present only five cusps in all.

Measurements of the type (an adult female in skin):—

Head and body 114 millim.; tail 118; hind foot 27; ear 17.

Skull: basal length 26; basilar length from henselion 24; greatest breadth 14·8; nasals  $12\cdot2 \times 3\cdot8$ ; interorbital breadth 6; breadth of brain-case 12·8; anterior zygoma-root 2·1; length of palate from henselion 13·2; diastema 8·3; palatine foramina  $5\cdot9 \times 2\cdot6$ ; length of upper molar series 4·8. Lower jaw: condyle to incisor-tip 19·7.

*Hab.* La Loma del Morro, near Merida, Venezuela, alt. 3000 metres.

Coll. S. Briceno, May 18, 1896.

"Eyes black, excessively small. Makes its nest in trees."  
—S. Briceno.

\* Ann. & Mag. Nat. Hist. (6) xiv. p. 350 (1894).



As in the case of "*Oryzomys*" *incanus*, it is impossible to assign a satisfactory position to this species, which differs in nearly every respect from typical members of the genus; but without a far more extensive knowledge of South-American Murines than is possessed at present, it would be unwise to add to the number of named groups of what used to be called "*Hesperomys*." Without doing this, however, I frankly confess myself incapable of finding a proper place for the present animal, and merely put it nominally under the heading of *Oryzomys* as a temporary expedient. Its slender form and long tail separate it from *Acodon*, its nail-clad pollex and normal muzzle show that it is not an *Oxymycterus*, while its narrow brain-case and rounded interorbital region separate it from all the ordinary species of *Oryzomys*.

As a species *O. lugens* seems really most closely allied to *O. incanus*, from which it differs by its much narrower brain-case, more rounded interorbital region, and differently shaped zygomatic root. Externally it seems very similar, but as the type of one is in spirit and the other in skin, an accurate comparison of the quality and colour of the fur is not at present possible.

*Eligmodon*\* *Moreni*, sp. n.

Size rather large as compared with the very small species composing the group. Fur long and soft, but not woolly. General colour above coarsely mixed fawn and brown, clearer fawn on the sides. Belly, as usual, pure white or yellowish white. (Immature specimens have the bases of the belly-hairs slate.) Ears large, oval. Palate-ridges 3—5. Upper sides of hands and feet silvery white. Palms and soles as usual in the group, granulated, with a large more or less hairy and corrugated pad at the base of the fingers and toes; a smaller more defined pad at the bases of pollex and hallux, and another a little way behind the last-named. Tail longer than the head and body, slender, thinly hairy throughout, blackish above, white below and on the sides.

Skull stoutly built, with a broad muzzle. Interorbital region flat, its edges square, not beaded. Anterior palatal foramina reaching backward one third the length of  $\frac{m.1}{m.2}$ . Posterior nares very narrow.

Dimensions of the type (an adult male in spirit):—

Head and body 80 millim.; tail 91; hind foot 23; ear 17.

\* *Calomys*, Waterh. (1837) nec Is. Geoff. (1830).

*Eligmodontia*, F. Cuv. 1837.

*Hesperomys*, Waterh. 1839.



Skull: basal length 20·5; basilar length 18·8; greatest breadth 12·4; nasals  $10 \times 2\cdot9$ ; interorbital breadth 4, interparietal  $3\cdot2 \times 9\cdot7$ ; palate length from henselion 11; diastema 6·5; anterior palatal foramina  $5\cdot4 \times 1\cdot6$ ; length of upper molar series 3·6. Lower jaw: condyle to incisor-tip 15·1.

*Hab.* Chilecito, Prov. Rioja, Argentina, alt. 1200 metres.

Collected and presented by Dr. F. P. Moreno, the distinguished head of the La Plata Museum, in whose honour I have named this very pretty little mouse.

*Eligmodon Moreni* is most nearly allied to *E. elegans*, Waterh. (*E. typus*, F. Cuv.), but is distinguished by its greater size, longer feet, and heavier muzzle. The type of Waterhouse's species being a bleached and deteriorated skin, and all the examples of the new form being in spirit, it is impossible to compare them very satisfactorily; but when further specimens are available there is little doubt that, judging by the great distance between the localities, other differences will become appreciable.

#### *Oxymycterus Iheringi*, sp. n.

Much smaller, more slenderly built, and less Oxymycterine than *O. nasutus*, *rufus*, and the other more typical species. Fur soft and thick. General colour uniform grizzled brown, scarcely paler below. Eyes not unusually small. Ears fairly large, thinly haired, brown. Claws much less lengthened than in *O. nasutus*, but still with the essential fossorial structure characteristic of the group; pollical claw short. Fifth hind toe decidedly longer than the hallux, reaching to the level of the base of the fourth toe. Tail almost as long as the head and body, slender, thinly haired, brown above, rather paler below. Mammæ 1—2=6.

Skull not specially elongated anteriorly, although the muzzle shows something of the characteristic *Oxymycterus* structure. Supraorbital edges smoothly rounded. Interparietal and anterior zygoma-root and other details very much as in *O. nasutus*, in spite of the great difference between the two in the general proportions of the skull.

Dimensions of the type (an adult female in spirit):—

Head and body 100 millim.; tail 94; hind foot 23·5; ear 16·7.

Skull: basal length 23; basilar length from henselion 21·4; greatest breadth 13; nasals  $11 \times 3\cdot8$ ; interorbital breadth 6; breadth of brain-case above meatus 12·5, interparietal  $2\cdot2 \times 7\cdot3$ ; palate length from henselion 10·7; diastema 6·8; anterior palatine foramina  $5\cdot2 \times 2\cdot2$ ; length of



upper molar series 4.2. Lower jaw: condyle to incisor-tip 16.8.

*Hab.* Taquara, Rio Grande do Sul.

*Coll.* Dr. H. von Ihering.

*Type* B.M. 86. 9. 16. 8.

The two specimens of this species in the Museum are part of the large collection of Taquara rodents worked out by Dr. Leche\*, by whom the present animals were called *Oxymycterus nasutus*, under which name they have remained in the Museum collection until now. Among other rodents collected by Dr. von Ihering at San Lorenzo, in the same province, there are specimens undoubtedly referable to the true *O. nasutus*; but these two from Taquara, and no doubt the others seen by Dr. Leche, are so different that there can be no question as to their specific distinction†. Dr. Leche was no doubt led astray by Hensel, in whose classical paper on the mammals of Rio Grande do Sul‡ the species now described is also referred to *O. nasutus*. Hensel's account must therefore in future be assigned to *O. Iheringi*, to our knowledge of whose structure and habits he makes some valuable contributions. The difference between the two forms is so great that it is difficult at first sight to realize that *O. Iheringi* is an *Oxymycterus* at all, as it is quite without the extraordinary trumpet-shaped muzzle possessed by *O. nasutus* and its allies. Probably it is most nearly related to Winge's *O. talpinus*§, as yet only known fossil from Lagoa Santa, but has rather a shorter head and shorter palatine foramina; so that I have not been able to assign it to the fossil form, as in the case of the animal next to be described.

In many ways *O. Iheringi* leads up towards *Blarinomys* (described below), but as it possesses an interparietal, it may fairly be called an *Oxymycterus* for the present, in spite of its not possessing the characteristic snout of ordinary *Oxymycterus*.

I have ventured to name this interesting species in honour of Dr. H. von Ihering, now Director of the São Paulo Museum, who obtained the specimens described, and to whose exertions, both as collector and writer, we are indebted for much of our knowledge of the fauna of Rio Grande do Sul.

\* Zool. Jahrb. i. p. 700 (1886).

† Dr. Leche says that of nineteen skulls examined by him the largest had a basilar length of 22 millim. The basilar length of the true *O. nasutus* is from 27 to 29 millim.

‡ Abh. Ak. Berl. 1872, p. 43.

§ E Museo Lundii, iii. p. 36 (1887).



## BLARINOMYS \*, gen. nov.

Most nearly allied to *Oxymycterus*. Form talpine or soricine, modified for burrowing. Head short, conical. Eyes quite minute. Ears small. Claws long, as in *Oxymycterus*; a distinct claw on the pollex; feet proportionally broad. Tail short. Fur crisp, velvety, iridescent.

Skull with most of the characters of that of *Oxymycterus*, but much shortened in the face and broadened posteriorly, so that the zygomatic barely exceeds the posterior cranial breadth. Interparietal entirely absent. Structure of molars as in the allied genus.

Type "*Oxymycterus*" *breviceps*, Winge †.

The peculiarities of *O. breviceps*, now for the first time properly known, render its retention in the genus *Oxymycterus* impossible. No doubt it is most nearly allied to that genus, but its blunt conical head, minute eyes, stiff iridescent fur, and absent interparietal are characters of such importance as to demand its generic separation.

The species was founded by Winge on the muzzle of a skull found fossil in the bone-caves of Lagoa Santa, and has not hitherto been known in the recent condition. The following description of the animal may therefore be of service. The specimen described is an adult male preserved in spirit, and was obtained by the well-known naturalist Dr. Emil A. Goeldi at Colonia Alpina, Theresopolis, Rio Janeiro.

Size and form about as in the short-tailed field-vole (*Microtus agrestis*). Fur short, velvety, crisp, and almost semispinous, some of the hairs being broadened and flattened. Colour of fur all over above and below uniform dark slaty grey, the tips of the hairs brown; a marked iridescence, chiefly ruby colour, visible on the back, at least while the fur is wet. Tip of muzzle, chin, and eyelids without brown hairs, and therefore in spirit showing prominently white; probably flesh-coloured in life. Eyes minute, hidden in the fur, scarcely  $1\frac{1}{2}$  millim. in their longest diameter. Ears very small, thickly furry, not projecting above the fur of the head. Palate-ridges 3—4. Hands and feet brown above; under-side of heel hairy, brown; pads 5 in front, 6 behind, the latter very small. Tail thinly hairy, uniformly brown.

Dimensions:—

Head and body 92 millim.; tail 46; hind foot 15·3; ear 9, flap of ear measured from behind 4·7.

\* From *Blarina*, the genus of American short-tailed Shrews.

† E Museo Lundii, iii. p. 34 (1887).



Skull: basal length 21; basilar length 19.2; greatest zygomatic breadth 13.2; nasals  $10.2 \times 3.8$ ; interorbital breadth 7.0; intertemporal breadth 6.2; breadth across brain-case above auditory meatus 13.1; palate length from henselion 10; diastema 5.8; palatal foramina  $4.7 \times 2.4$ ; length of upper molar series 4.1. Lower jaw: condyle to incisor-tip 15.4.

This most interesting and peculiar little animal has a certain superficial resemblance to *Acodon nigrata*, Licht., found by Dr. Goeldi at the same time and place, but is readily distinguished by its many essential differences. It is evidently a regular burrower, and probably passes a more mole-like life than any other Sigmodont as yet described.

*Ctenomys Perrensi*, sp. n.

Size of and most nearly allied to *C. torquatus*, Licht. General colour dark buff or clay-colour, heavily mixed with black along the median line of the face and back. From eye to ear and below the latter a rather lighter patch, succeeded below again by the brownish cheeks. Under surface from throat to belly rich buff ("ochraceous-buff" of Ridgway), but patches on the axillæ and groins are pure sharply contrasting white. Upper surface of hands and feet thinly haired, white.

Skull short, broad, and rounded, not heavily ridged. Zygomatic decidedly exceeding the posterior breadth. Nasals short, tapering backwards, unusually little, broad and truncated behind. Interorbital region short and very broad, the postorbital processes and ledges little developed. Frontoparietal suture nearly directly transverse, little bowed backwards. Bullæ small and little inflated, especially anteriorly. Incisors more curved backwards terminally, and therefore forming a larger arc of a smaller circle than usual.

Dimensions of the type (an adult male, measured by collector):—

Head and body 200 millim.; tail 67; hind foot 31, with claw (dried) 37.

Skull: basal length 43.5; basilar length from henselion 40.7; zygomatic breadth 30; posterior breadth on bullæ 23; ditto on projecting lip of meatus 27.3; least breadth behind zygomata 19.3; nasals  $16.2 \times 7.6$ ; interorbital breadth 11.5; length of frontals in middle line 13; palate length from henselion 21.3; diastema 12.9; tip of incisor to alveolus of p.<sup>4</sup> 14.9. Lower jaw: back of condylar process to tip of incisors 35; greatest breadth 35.8.



*Hab.* Goya, Corrientes, Argentina.

Collected by Mr. Richard Perrens, May 7, 1896.

This species is readily distinguished from *C. torquatus*, the Uruguayan Tuco-tuco, which appears to be its nearest ally, by its very differently coloured under surface, less tapering nasals, and more backwardly curved incisors. In colour, especially below, it is very like Waterhouse's *C. boliviensis*, but is, of course, very far smaller.

I have named this species in honour of its discoverer, Mr. Richard Perrens, to whom we are indebted for the re-discovery of Azara's "Micouri à queue longue," of which I gave an account in 1894\*.

*C. Perrensi* may prove to be Azara's Tuco-tuco; but that animal has never had a distinctive name applied to it, owing to its identification with the Minas Geraes form, *Ctenomys brasiliensis*, de Blainv.

Lower down the same river-system, at La Plata, another Tuco-tuco occurs, apparently referable to *C. minutus*, Nehring.

*Echinomys centralis*, sp. n.

Both in the Merida and Bogotá collections there occur specimens of the genus *Echinomys* which, on account of their (in comparison with other species) "very dark brown colour" and other characters, may fairly be assigned to *E. semispinosus*, Tomes†, especially if, as seems to be the case, Tomes's woodcut of the skull is incorrect in details.

But if these are *E. semispinosus*, two examples, clearly different, recently received from Nicaragua, cannot be that animal, and therefore need description as new.

No doubt they are the same as the examples of "*E. semispinosus*" recorded by Mr. True‡ from Greytown, Nicaragua, and from Pacuare, Costa Rica; so that further details about the species may be gained from his paper.

Size, as judged by the skull, about as in *E. semispinosus*. General colour much brighter and richer, less heavily black-lined on the back, and with the spineless fur of the sides and rump much brighter rufous. Hands and feet dull whitish above, the darker mark which runs along the outer §

\* Ann. & Mag. Nat. Hist. (6) xiv. p. 184.

† P. Z. S. 1860, p. 265.

‡ P. U. S. Nat. Mus. 1888, p. 467.

§ Messrs. Allen and Chapman in their description (Bull. Am. Mus. N. H. v. p. 224, 1893) say "inner," but have evidently been misled by the reversed position of the feet in the skins examined. This is a little



side of the metatarsal in some species—notably in *E. trinitatis*, All. & Chap.—little marked.

Skull, as compared with those of the specimens assigned to *E. semispinosus*, distinguished by the following characters:—The nasals run evenly backwards to a sharp median point, instead of being more or less bluntly truncated behind. The ankylosed parieto-interparietal suture runs nearly squarely across, instead of being evenly convex forwards, and from its outer corners little ridges run forwards to meet those that run back from the supraorbital ledges, while in the allied species the posterior ridges are at a higher level and do not coalesce with the anterior. Zygomata much broader both in the ascending and horizontal portions. Anterior palatine foramina narrower and less widely open. Posterior nares more widely open. Pterygoid processes broad and spatulate, over 2 millim. in their greatest diameter, as compared with about 1 millim. in *E. semispinosus*.

Dimensions of the type (an adult male):—

Hind foot, without claw 49 millim., with claw 53\*.

Skull: basal length (c.) 47·5; basilar length 41; greatest breadth 26·5; nasals 21·3 × 6; interorbital breadth 12·5; breadth of interparietal 12·5; palate length from henselion 20; diastema 12·5; anterior palatine foramina 5 × 2·5; length of upper molar series 9·2. Lower jaw: back of condylar process to incisor-tip 34.

*Hab.* San Emilio, south end of Lake Nicaragua.

Coll. W. R. Richardson.

*Type* obtained March 27, 1896.

The above differences, slight as they seem, are perfectly constant through series of seven of the Colombian and two of the Nicaraguan form, and it is therefore evident that the two animals cannot be regarded as both belonging to *E. semispinosus*. *E. trinitatis*, again, though belonging to the same group, is evidently quite distinct from either of the others.

### *Marmosa fuscata*, sp. n.

Size rather smaller than in *M. incana*, Lund †. Ears

trap which one has to be constantly on one's guard against in describing from modern skins. Another slip in the same account is that the molar series is said on p. 224 to be 10 millim. long and is given as 8·5 in all the specimens measured on p. 226. The latter is evidently correct.

\* The skin is too badly made to make other external measurements worth taking; but Mr. True (*l. c.*) has given accurate measurements of several spirit-specimens of what is no doubt the same species.

† *Didelphys grisea* of Cat. Mus. B. M. p. 349, but not of Desmarest. For the real *M. grisea* an earlier name has since turned up in *Didelphys*



large, their internal basal projection small; a rounded lobe at the base of their outer edge. Fur close, soft, and velvety. General colour above a dark smoky or bistre-brown, a dull buffy tinge present on the fore back and sides. Under surface dirty whitish, the slaty bases of the hairs showing through; line of demarcation on sides fairly well defined. Colour of face, limbs, and tail as in *M. incana*.

Skull similar in its general proportions to that of *M. incana*, but decidedly smaller. Supraorbital edges not beaded. Anterior palatine foramina extending backwards only to the canines. Canines very short. Middle upper premolars longer horizontally than vertically, very narrow transversely.

Dimensions of the type (an adult female in skin, apparently somewhat contracted) :—

Head and body 118 millim.; tail 138; ear 19.

Skull: lambda (back end of parietal suture) to nasal tip 29; greatest breadth (c.) 17; nasals  $14 \times 4$ ; interorbital breadth 6; intertemporal breadth 6.1; palate length 18; palate breadth between outer corners of  $\frac{m. 3}{m. 1-3}$  9.6. Combined length of  $\frac{m. 1-3}{m. 1-3}$  5.5.

*Hab.* Rio Abbaregas, Merida, Venezuela, alt. 1630 metres.

Coll. S. Briceno, April 6, 1896.

The Merida collection contains three species of the *Marmosa* group, of which the largest is a typical *M. murina* and the smallest is so like *M. pusilla* that, in spite of the considerable extension of the known range involved, I do not see any reason for distinguishing it. The middle one, however, although it may be said to represent *M. incana*, cannot be actually assigned to that species, from which it differs by its decidedly smaller size and much darker colouring, notably that of the lower surface. No other described species is at all like it.

XLVII.—*Descriptions of new Terrestrial Mollusca from South Africa.* By JAMES COSMO MELVILL, M.A., F.L.S., and JOHN HENRY PONSONBY, F.Z.S.

[Plate XVI.]

SINCE the publication of our last paper (Ann. & Mag. Nat. Hist. ser. 6, vol. xvi. p. 478), describing five new *Enneæ* from the South-African region, two more, both of them conspicuous

*marmota*, Oken, Lehrb. Nat. iii., Zool. ii. p. 1140 (1816), so that the Paraguay and Corrientes species must bear the name of *Marmosa marmota*. (See Ann. & Mag. Nat. Hist. (6) xiv. p. 184, 1894, and (6) xvi. p. 58, 1895.)





Thomas, Oldfield. 1896. "XLVI.—On new small mammals from the Neotropical region." *The Annals and magazine of natural history; zoology, botany, and geology* 18, 301–314. <https://doi.org/10.1080/00222939608680459>.

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